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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,937	11/20/2001	William C. Black	X-933 US	1537
24309	7590	07/12/2005	EXAMINER	
XILINX, INC ATTN: LEGAL DEPARTMENT 2100 LOGIC DR SAN JOSE, CA 95124			WARE, CICELY Q	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/989,937

Applicant(s)

BLACK, WILLIAM C.

Examiner

Cicely Ware

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-25 is/are allowed.
- 6) ☒ Claim(s) 1-5, 10-14, 26-29 is/are rejected.
- 7) ☒ Claim(s) 6-9 and 15-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

a. Pg. 6, line 13, applicant uses the phrase "internally at a high rates".

Examiner suggests using "internally at high rates" for clarification purposes.

b. Pg. 6, line 15, applicant uses the phrase "data at rates that makes the local". Examiner suggests using "data at rates that make the local" for clarification purposes.

Appropriate correction is required.

2. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

3. Claim 11 is objected to because of the following informalities:

a. Claim 11, applicant omits the period after the claim number. Examiner suggests applicant use a uniform numbering system for clarification purposes.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Seidel (US Patent 3,763,437).

(1) With regard to claim 1, Seidel discloses in (Fig. 2) an amplifier having an output impedance (28), wherein the amplifier sources a transmission line; and a feed-forward circuit in parallel (10, 11) with said amplifier wherein the feed-forward circuit compensates for transmission characteristics of the transmission line (col. 1, lines 10-11, 15-23, 42-43, col. 3, lines 18-21, 23-30, 42-48, 65-67, col. 4, lines 1-2).

(2) With regard to claim 10, Seidel discloses in (Fig. 2) a data processing module (25) having an output; an amplifier (24) having an input coupled to the output of the data processor, and an output; and a feed-forward circuit (10, 11) having an input coupled to the output of the data processing module and an output coupled to the output of the amplifier (Table X, col. 1, lines 10-11, 15-23, 42-43, col. 3, lines 18-21, 23-30, 42-48, 65-67, col. 4, lines 1-2).

6. Claim 26 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Neil et al. (US Patent 3,886,470).

(1) With regard to claim 26, O'Neil et al. discloses obtaining a capacitance

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indicator; selecting a desired capacitance for a feed-forward circuit that is parallel with an amplifier, wherein the desired capacitance is based on the capacitance indicator (col. 5, lines 41-54).

(2) With regard to claim 29, O'Neil et al. further discloses the step of obtaining further comprises determining the capacitance value based on an analysis of a transmitted signal (col. 5, lines 41-54).

It is well known in the art that a shunt capacitance is a variable capacitance that inherently varies with some type of analysis depending on design choice.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-5, 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siedel (US Patent 3,763,437), as applied to claim 1, in view of O'Neil et al. (US Patent 3,886,470).

(1) With regard to claim 2, claim 2 inherits all the limitations of claim 1. However Siedel does not disclose wherein said feed-forward circuit further comprises a capacitor, wherein a capacitance value of said capacitor is determined at least in part by a data transition rate.

However O'Neil et al. discloses wherein said feed-forward circuit further comprises a capacitor, wherein a capacitance value of said capacitor is determined at least in part by a data transition rate (Fig. 2 (54), col. 5, lines 41-54).

It is well known in the art that a shunt capacitance is a variable capacitance that inherently varies with some type of analysis depending on design choice. Therefore it would have been obvious to one of ordinary skill in the art to modify Siedel in view of O'Neil et al. to incorporate said feed-forward circuit further comprising a capacitor, wherein a capacitance value of said capacitor is determined at least in part by a data transition rate to provide a small correction to the phase characteristic of the delay path whose dominant effect occurs at low frequencies (O'Neil et al., col. 5, lines 46-48).

(2) With regard to claim 3, claim 3 inherits all the limitations of claim 1. O'Neil et al. further discloses in (Fig. 2) wherein said feed-forward circuit (54-22), further comprises a capacitor (56), wherein a capacitance value of said capacitor is determined based at least in part on a characteristic of a transmission medium to which said output interface is electrically coupled (col. 5, lines 41-54).

(3) With regard to claim 4, claim 4 inherits all the limitations of claim 1. O'Neil et al. further discloses in (Fig. 2) wherein said feed-forward circuit (11-22) further comprises an amplifier (12) in series with a capacitor (56).

(4) With regard to claim 5, claim 5 inherits all the limitations of claim 1. O'Neil et al. further discloses in (Fig. 2) wherein said feed-forward circuit (11-22) further comprises a resistive element (52) in series with a capacitor (56).

(5) With regard to claim 11, see rejection of claims 10 and 2.

(6) With regard to claim 12, see rejection of claims 10 and 3.

(7) With regard to claim 13, see rejection of claims 10 and 4.

(8) With regard to claim 14, see rejection of claims 10 and 5.

9. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil et al. (US Patent 3,886,470).

With regard to claims 27 and 28, claims 27 and 28 inherit all the limitations of claims 26 and 27 respectively.

However O'Neil et al. does not disclose reading the capacitance value from a specific location and calculating the capacitance value using the data transmission rate

However there are numerous well-known methods used to read a capacitance value in a circuit.

Therefore it would have been obvious to one of ordinary skill in the art that O'Neil could have calculated the capacitance value with out changing the functionality of the device.

Therefore claims 27 and 28 do not constitute patentability.

Allowable Subject Matter

10. Claims 6-9, 15-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a

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statement of reasons for the indication of allowable subject matter: The instant application discloses a system, device, and method for compensation of distortion caused by transmission line effects. Prior art references show similar methods but fail to teach: **“wherein said feed-forward circuit further comprises wherein each one of the switched capacitors includes a capacitor in series with a switch and at least one of said plurality switch capacitors is selectable based on a desired capacitance value to be placed in parallel with said output impedance”**, as in claims 6 and 15; **“a feed-forward control module coupled to the feed-forward circuit to control a property of said feed-forward circuit based on a lease one characteristic of a transmission medium to which said output interface is electrically coupled”**, as in claim 7 and 16; **“wherein the feed-forward control module further comprises a plurality of user selectable switches”**, as in claims 8 and 17; **“wherein the property is one of a capacitance value and a resistance value”**, as in claim 9.

10. Claims 18-25 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter: The instant application discloses a system, device, and method for compensation of distortion caused by transmission line effects. Prior art references show similar methods but fail to teach: **“wherein the input of the amplifier is coupled to an output of the second device and the output of the amplifier is coupled to the input of the first device via the printed circuit board”**, as in claim 18.

Conclusion


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 571-272-3047. The examiner can normally be reached on Monday – Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Cicely Ware

cqw
July 11, 2005



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